

comprises a grooved surface.

A⁹ 53. The lamella in accordance with claim 44, wherein said non-planar surface comprises a grooved surface.---

REMARKS

Summary of the Amendment

Upon entry of the above amendment, the specification and claims 1, 12, 22, 32, 44, 46, and 48 - 50 will have been amended and new claims 51 - 53 will have been entered for consideration by the Examiner. Accordingly, claims 1 - 53 currently remain pending.

Summary of the Official Action

In the instant Office Action, the Examiner has objected to the drawings, specification and claims and has rejected all claims based upon formal matters and over the art of record. By the present amendment and remarks, Applicants submit that the objections and rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

Objection to Drawings is Moot

By the present amendment to paragraph [0059], Applicants submit that the objection to the drawings is moot. In particular, Applicants note that this paragraph refers to the lamellae depicted in Figure 1, i.e., lamellae 10, 10.1.

Thus, Applicants request that the Examiner reconsider and withdraw the objection to the drawings and indicate that the drawings are acceptable.

Request for Correction of Specification

Applicants acknowledge that the terms upper nozzle wall and lower nozzle wall were inadvertently transposed when they were presented in the listing of reference numerals on page 13. However, as this list does not include a paragraph number to which Applicants can refer in amending the specification, Applicants respectfully request that the Examiner, by informal amendment, amend the list to clarify that reference numeral 13.1 refers to the upper nozzle wall and that reference numeral refers to the lower nozzle wall, so that the specification is in proper form.

Objection to the Claims is Moot

By the present amendment, claims 48 - 50 have been presented to comply with the Examiner's request for typewritten versions of these claims. Moreover, Applicants note that these claims have been additionally amended by the instant amendment in order to address formal matters, as discussed *infra*.

Accordingly, Applicants request that the Examiner reconsider and withdraw the objection to the claims and indicate that the claims are in proper form.

Traversal of Rejection Under 35 U.S.C. § 112, First Paragraph

Applicants traverse the rejection of claims 1 - 50 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed. In particular, the Examiner

asserts that it is unclear what structures are provided on the surfaces of the lamellae.

Applicants direct the Examiner's attention to Figures 3a and 3b and the associated text in paragraphs [0062] - [0068]. In this regard, Applicants note that the originally filed specification provides clear and unambiguous disclosure that the surfaces of the lamellae are provided with a structured (i.e., grooved or non-planar) surface in which the disclosed structures are rectangular and/or wedge-shaped and/or parabolic and/or essentially round with constant and/or varying depths and/or varying spacing. *See* paragraph [0064].

Moreover, Applicants note that the instant application has not been amended prior to the Examiner's first action on the merits, thus, all subject matter disclosed in the instant application was submitted at the time of filing, including the necessary discussion of the structured surface.

Accordingly, Applicants submit that the original specification provides the requisite disclosure to show that the inventors had possession of the invention at the time the application was filed, and request that the Examiner reconsider and withdraw the rejection of claims 1 - 50 under 35 U.S.C. § 112, first paragraph, and indicate that the application and claims are in compliance with the requirements of the statute.

Traversal of Rejection Under 35 U.S.C. § 112, Second Paragraph

Applicants traverse the rejection of claims 1 - 50 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner asserts that the terms "structure"

and “predominant” render the claims indefinite.

As discussed above, the instant application provides ample discussion and support for the term “structure” as recited in the pending claims. However, in an effort to advance prosecution of the instant application, Applicants have amended the independent claims in order to clarify the term “structure” as a “non-planar surface.”

In this regard, Applicants note that this amended is intended merely to clarify claim terminology, and Applicants do not believe that this amended alters the scope of the claims. Moreover, Applicants note that, as this amended is presented to clarify claim terms and not to address any subject matter in the applied art of record, no estoppel should be deemed to attach.

With regard to the term “predominant,” Applicants note that this term is utilized in the specification and claims in accordance with its plain and ordinary meaning. Thus, as the claim term is being utilized according to its convention meaning, and its use in the application and claims is fully discussed in the application, Applicants submit that the claims cannot be rendered indefinite.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1 - 50 under 35 U.S.C. § 112, second paragraph, and indicate that the claims fully in compliance with the requirements of the statute.

Traversal of Rejection Under 35 U.S.C. § 102(b)

1. Over Ruf

Applicants traverse the rejection of claims 1 - 3, 11, 12, 15, 17 - 23, 31, 32, 34, 37 - 42, 44, 46, and 48 - 50 under 35 U.S.C. § 102(b) as being anticipated by RUF et al. (U.S. Patent No. 5,645,689) [hereinafter "RUF"].

Applicants' independent claim 1 recites, *inter alia*, a lamella body having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body, and said downstream lamella end comprising a first surface, a portion coupled to an sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a non-planar surface. Moreover, independent claim 22 recites, *inter alia*, a lamella mounted within said headbox nozzle having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body; and said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a non-planar surface. Applicants' independent claim 44 recites, *inter alia*, a lamella body having a first and second surface and a mountable end and a downstream end remote from said mountable end, and said downstream end comprising a sloped surface obliquely oriented with respect to and coupled to said first surface and a non-planar surface

provided as said second surface.

Applicants note that, while each of these claims has been amended, the amended has been directed to clarify that the original term “structure” refers to a “non-planar surface.” As the applied art fails to provide any disclosure or suggestion of a surface having a structure, as originally recited, or a non-planar surface, as now recited, no estoppel should be deemed to attach.

Applicants note that, while RUF discloses lamellae in a multilayer headbox, RUF fails to provide any disclosure regarding the surfaces of the lamellae. In particular, Applicants note that RUF fails to provide any disclosure that a second surface (or any surface) of the lamellae include a non-planar surface, as recited in at least independent claims 1, 22, and 44. Moreover, while RUF discloses an insertable lamella tip, there is no disclosure of the recited second surface having a non-planar surface.

Because RUF fails to disclose at least the above-noted feature, Applicants submit that this document fails to disclose each and every recited feature of the instant invention. Thus, Applicants submit that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the instant rejection should be withdrawn.

Further, Applicants submit that claims 2, 3, 11, 12, 15, 17 - 21, 23, 31, 32, 34, 37 - 42, 46, and 48 - 50 are allowable at least for the reason that these claims depend from allowable

base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that RUF fails to anticipate, *inter alia*, the lamella is structured and arranged to be mounted within the headbox nozzle supplying a suspension for forming paper, cardboard or tissue machine, as recited in claim 2; said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 3; in combination with the headbox, wherein said lamella is located within the headbox nozzle and the upper nozzle wall in the area of the exit opening is coupled to an adjustable screen, and wherein said sloped portion is positioned toward the adjustable screen, as recited in claim 11; said non-planar surface comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 12; said lamella has a length that is at least about 80% of the nozzle length, as recited in claim 15; said lamella is structured and arranged to be mounted in a headbox with sectioned consistency control, as recited in claim 17; said lamella is structured and arranged to be mounted in a headbox designed for a stream velocity of more than about 1,500 m/s, as recited in claim 18; the stream velocity is more than about 1,800 m/s, as recited in claim 19; said lamella is structured and arranged to be mounted in a multi-layer headbox, as recited in claim 20; said lamella is structured and arranged to be an intermediate lamella, as recited in claim 21; said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 23; an

adjustable screen coupled to said upper nozzle wall, wherein said sloped portion is positioned toward the adjustable screen, as recited in claim 31; said non-planar surface comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 32; said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 34; said headbox is structured and arranged for sectioned consistency control, as recited in claim 37; said headbox designed for a stream velocity of more than about 1,500 m/s, as recited in claim 38; the stream velocity is more than about 1,800 m/s, as recited in claim 39; said headbox comprises in a multi-layer headbox, as recited in claim 40; said lamella is structured and arranged to be an intermediate lamella, as recited in claim 41; said lamella is fixedly mounted in said headbox nozzle, as recited in claim 42; said non-planar surface comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 46; the first surface is provided with a non-planar surface, as recited in claim 48; the first surface is provided with a non-planar surface, as recited in claim 49; and the first surface is provided with a non-planar surface, as recited in claim 50.

Accordingly, Applicants request that the Examiner reconsider and withdraw the

rejection of claims 1 - 3, 11, 12, 15, 17 - 23, 31, 32, 34, 37 - 42, 44, 46, and 48 - 50 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

2. Over Rodal

Applicants traverse the rejection of claims 1 - 3, 13 - 15, 18- 23, 33 - 35, 38- 44, and 48 - 50 under 35 U.S.C. § 102(b) as being anticipated by RODAL et al. (U.S. Patent No. 4,617,091) [hereinafter "RODAL"].

As with RUF discussed above, Applicants note that RODAL also discloses elements for use in a multilayer headbox. However, while disclosing that an end of the element can be curved (as shown in Figure 1c), there is no disclosure that this element includes a first surface and a portion coupled to and sloped relative to the first surface, as recited in at least independent claims 1, 22, and 44.

Because RUF fails to disclose at least the above-noted feature, Applicants submit that this document fails to disclose each and every recited feature of the instant invention. Thus, Applicants submit that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the instant rejection should be withdrawn.

Further, Applicants submit that claims 2, 3, 13 - 15, 18 - 21, 23, 33 - 35, 38 - 43, and 48 - 50 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present

invention. In particular, Applicants submit that RODAL fails to anticipate, *inter alia*, the lamella is structured and arranged to be mounted within the headbox nozzle supplying a suspension for forming paper, cardboard or tissue machine, as recited in claim 2; said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 3; said lamella is composed of at least one high-performance polymer, as recited in claim 13; said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 14; said lamella has a length that is at least about 80% of the nozzle length, as recited in claim 15; said lamella is structured and arranged to be mounted in a headbox designed for a stream velocity of more than about 1,500 m/s, as recited in claim 18; the stream velocity is more than about 1,800 m/s, as recited in claim 19; said lamella is structured and arranged to be mounted in a multi-layer headbox, as recited in claim 20; said lamella is structured and arranged to be an intermediate lamella, as recited in claim 21; said first surface is structured and arranged to be positioned to face one of the nozzle walls, as recited in claim 23; wherein said lamella is composed of at least one high-performance polymer, as recited in claim 33; said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 34; wherein said nozzle has a nozzle length and said lamella has a length that is at least about 80% of said nozzle length, as recited in claim 35; said headbox designed

for a stream velocity of more than about 1,500 m/s, as recited in claim 38; the stream velocity is more than about 1,800 m/s, as recited in claim 39; said headbox comprises in a multi-layer headbox, as recited in claim 40; said lamella is structured and arranged to be an intermediate lamella, as recited in claim 41; said lamella is fixedly mounted in said headbox nozzle, as recited in claim 42; wherein said lamella is pivotably mounted in said headbox nozzle, as recited in claim 43; the first surface is provided with a non-planar surface, as recited in claim 48; the first surface is provided with a non-planar surface, as recited in claim 49; and the first surface is provided with a non-planar surface, as recited in claim 50.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1 - 3, 13 - 15, 18- 23, 33 - 35, 38- 44, and 48 - 50 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

Traversal of Rejection Under 35 U.S.C. § 103(a)

Applicants traverse the rejection of claims 4 - 10, 13, 14, 16, 24 - 30, 33, 34, 36, 43, and 45 - 47 under 35 U.S.C. § 103(a) as being unpatentable over RUF. The Examiner asserts that, while it is silent as to dimensions and materials, it would have been obvious to modify RUF so as to render the instant invention unpatentable.

Applicants note that, as RUF fails to provide any teaching or suggestion for even the general structure of the recited lamella, e.g., RUF fails to teach or suggest a second surface having a non-planar surface, as recited in the independent claims, it would not have been

obvious to modify the dimensions and/or materials of the RUF lamella in any manner that would render the instant invention unpatentable.

Thus, Applicant submit that, as RUF fails to teach or suggest the combination of features recited in at least independent claims 1, 22, and 44, RUF fails to render the instant invention unpatentable. Moreover, Applicants submit that claims 4 - 10, 13, 14, 16, 24 - 30, 33, 34, 36, 43, and 45 - 47 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicant submits that no proper modification of RUF teaches or suggests, *inter alia*, said sloped portion is oriented at an angle of between about 1.5° to 6° to said first surface, as recited in claim 4; said angle is between about 2.5° to 5°, as recited in claim 5; said downstream lamella end has a height of between about 0.3 mm and 1.0 mm, as recited in claim 6; the height is between about 0.4 mm and 0.6 mm, as recited in claim 7; said height is determined from a distance between an end of said sloped portion and said second surface, as recited in claim 8; said lamella has a predominant lamella thickness of between about 2 mm and 6 mm, as recited in claim 9; said predominant thickness is about 4 mm, as recited in claim 10; said lamella is composed of at least one high-performance polymer, as recited in claim 13; said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 14; in combination with the headbox, wherein a flow

velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 3 m/s, as recited in claim 16; said sloped portion is oriented at an angle of between about 1.5° to 6° to said first surface, as recited in claim 24; said angle is between about 2.5° to 5°, as recited in claim 25; said downstream lamella end has a height of between about 0.4 mm and 0.6 mm, as recited in claim 26; the height is about 0.5 mm, as recited in claim 27; said height is determined from a distance between an end of said sloped portion and said second surface, as recited in claim 28; said lamella has a predominant lamella thickness of between about 2 mm and 6 mm, as recited in claim 29; said predominant thickness is about 4 mm, as recited in claim 30; said lamella is composed of at least one high-performance polymer, as recited in claim 33; said high-performance polymer comprises at least one of a polyphenylene sulfone (PPSU), a polyethersulfone (PES), a polyetherimide (PEI) or a polysulfone (PSU), as recited in claim 34; a flow velocity of the fibrous suspension in the area of said downstream lamella end is within a range of more than about 3 m/s, as recited in claim 36; wherein said lamella is pivotably mounted in said headbox nozzle, as recited in claim 43; said sloped surface is obliquely oriented relative to said first surface at an angle of between about 1.5° to 6° to said first surface, as recited in claim 45; said non-planar surface comprises grooves having at least one of: (A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure, (B) varying depth, and (C) varying spacing, as recited in claim 46; and said downstream lamella end has a height,

determined from a distance between an end of said sloped portion and said second surface, of between about 0.4 mm and 0.6 mm, as recited in claim 47.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 4 - 10, 13, 14, 16, 24 - 30, 33, 34, 36, 43, and 45 - 47 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

Newly Submitted Claims are Allowable

Applicants submit that new presented claims 51 - 53 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that the applied art fails to anticipate or render unpatentable, *inter alia*, said non-planar surface comprises a grooved surface, as recited in each of claims 51 - 53.

Accordingly, Applicants request that the Examiner consider the merits of newly presented claims 51 - 53 and indicate that these claims are allowable.

Application is Allowable

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

Authorization to Charge Deposit Account

The Commissioner is authorized to charge to Deposit Account No. 19 - 0089 any

necessary fees, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, in order to maintain pendency of this application.

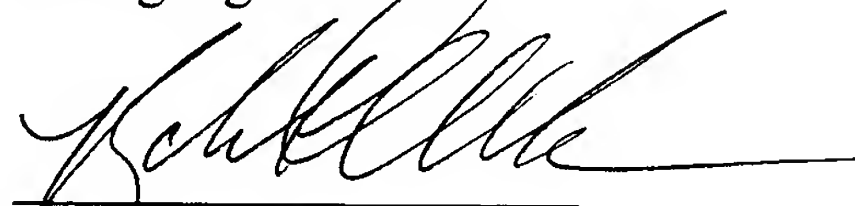
CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 1 - 53. The claims have been amended to eliminate any arguable basis for rejection under 35 U.S.C. § 112. In addition, the applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

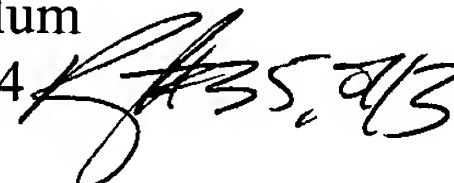
Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,
Wolfgang RUF et al.



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APPENDIX

Marked-Up Copies of the Amended Paragraphs:

Please replace paragraph [0059] with the following amended paragraph:

[0059] According to the invention, the plurality of intermediate lamellae 16.1 are embodied or formed as lamellae 10, 10.1 (as depicted in Figure 1) according to the invention.

Marked-Up Copies of the Amended Claims:

1. (Amended) A lamella of a headbox through which at least one fibrous suspension flows, the headbox having a machine-width headbox nozzle with a nozzle length and an exit opening, and the headbox nozzle being delimited by an upper nozzle wall and a lower nozzle wall, said lamella, which is structured and arranged to be mounted within the headbox nozzle, comprising:

a lamella body having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body; and

said downstream lamella end comprising a first surface, a portion coupled to an sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a [structure] non-planar surface.

12. (Amended) The lamella in accordance with claim 1, wherein said [structure] non-planar surface comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially

round structure,

(B) varying depth, and

(C) varying spacing.

22. (Amended) A headbox for supplying at least one fibrous suspension flows, comprising:

a headbox nozzle having an exit opening, said headbox nozzle and said exit opening being delimited by an upper nozzle wall and a lower nozzle wall;

a lamella mounted within said headbox nozzle having a downstream lamella end structured and arranged to be positioned downstream, relative to a suspension flow direction, of an opposite end of said lamella body; and

said downstream lamella end comprising a first surface, a portion coupled to and sloped relative to said first surface, and a second surface, located opposite said first surface, provided with a [structure] non-planar surface.

32. The headbox in accordance with claim 22, wherein said [structure] non-planar surface comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure,

(B) varying depth, and

(C) varying spacing.

44. (Amended) A lamella for a headbox in a fibrous material web production machine, comprising:

a lamella body having a first and second surface and a mountable end and a downstream end remote from said mountable end;

said downstream end comprising a sloped surface obliquely oriented with respect to and coupled to said first surface and a [structure] non-planar surface provided [at least one of in and on] as said second surface.

46. (Amended) The lamella in accordance with claim 45, wherein said [structure] non-planar surface comprises grooves having at least one of:

(A) at least one of essentially rectangular, wedge-shaped, parabolic, and essentially round structure,

(B) varying depth, and

(C) varying spacing.

48. (Amended) The lamella in accordance with claim 1, wherein the first surface is provided with a [structure] non-planar surface.

49. (Amended) The lamella in accordance with claim 22, wherein the first surface is provided with a [structure] non-planar surface.

50. (Amended) The lamella in accordance with claim 44, wherein the first surface is provided with a [structure] non-planar surface.